



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/658,703

09/09/2003

Santi Kulprathipanja

108297

2306

23490

7590

10/19/2007

HONEYWELL INTELLECTUAL PROPERTY INC  
PATENT SERVICES  
101 COLUMBIA DRIVE  
P O BOX 2245 MAIL STOP AB/2B  
MORRISTOWN, NJ 07962

EXAMINER

SINGH, PREM C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/658,703		KULPRATHIPANJA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Prem C. Singh		1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1797

## **DETAILED ACTION**

### ***Response to Amendment***

Amendment to claims 1, 16, 17, and 21 is noted.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1717

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jones (US Patent 3,303,233).

Jones invention provides an alkylating agent which when condensed with an alkylatable aromatic compound produces an alkylate having a structure suitable for the production of biologically soft detergents therefrom without sacrifice in the yield of product, effectiveness of the final detergent product or its water solubility (See column 2, lines 59-65). The alkylate intermediate, if an alkylaryl hydrocarbon, may be sulfonated and thereafter neutralized with a suitable alkaline base, such as sodium hydroxide to form an alkylaryl sulfonate (anionic) type of detergent which is most widely used for household, commercial and industrial purposes (See column 3, lines 22-28).

Art Unit: 1797

The alkyl benzene disclosed in Jones invention is produced by using normal paraffins separated on molecular sieve, dehydrogenating, and reacting with benzene under typical operating conditions. Alkyl benzene sulfonate in Jones invention is also produced by sulfonating alkyl benzene under typical operating conditions. Thus, alkyl benzene and alkyl benzene sulfonate produced by Jones invention are similar to the claimed compositions.

In the event any differences can be shown for the product of the product-by-process claims 1-23, as opposed to the product taught by the reference to Jones, such differences would have been obvious to one of the ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

### ***Response to Arguments***

Applicant's arguments filed 00/12/2007 have been fully considered but they are not persuasive.

The Applicant argues that the Jones process is homogeneous acid catalyzed, and while producing a product with relatively more straight chained alkyl groups because it starts with a high concentration of straight chained alkylating agent, it only produces approximately 20% of this desired product with much more branched

Art Unit: 1797

alkylbenzenes, and is known to those skilled in the art. The present invention, in the amended claims 1, 16, 17 and 21, uses a solid, molecular sieve catalyst. This solid catalyst is a physically constraining catalyst which limits undesired reactions and produces a much higher LAB (linear alkylbenzene) content in the product, and subsequently a much higher quality intermediate for converting to detergent. Therefore, it is submitted that the amended claims 1, 16, 17 and 21 are not taught, anticipated or rendered obvious by the reference.

The Applicant's argument is not persuasive because Jones discloses, "The alkylation reaction is effected in the presence of a suitable catalyst capable of promoting the condensation reaction, generally an inorganic material characterized as an acid-acting compound which catalyzes the alkyl transfer reactions involved in the process. Acid-acting inorganic compounds include anhydrous aluminum chloride or aluminum bromide, boron trifluoride, and other acid-acting catalysts." (Column 8, lines 13-29). Thus, clearly Jones is conducting not only homogeneous acid catalyzed process but also heterogeneously solid acid catalyzed process. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify Jones invention and use any effective solid acid catalyst, including a molecular sieve as claimed, for a good quality linear alkylbenzene. See *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). It is to be noted that the present claims are anticipated or obvious over prior art because the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different

Art Unit: 1197

process. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113.

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prem C. Singh whose telephone number is 571-272-6381. The examiner can normally be reached on MF 8:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PS 1092707



Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700